Old Dominion College

Norfolk, Virginia 1968

A Survey of History Philosophy

and

Research in Orientation and Mobility

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A SURVEY OF HISTORY PHILOSOPHY AND RESEARCH IN ORIENTATION AND MOBILITY

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NORFOLK, VIRGINIA
1968

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INTRODUCTION

In countries all over the world severe impairment of man's eyesight continues to occur in so many of our populations that the numbers have a discouraging ring. Experts have said that somewhere between ten to fourteen million people in the world today are blind. This estimate includes those with vision impaired in such a way as to be uncorrectable, and those who are totally blind. Jablonski, an authority in the field of rehabilitation of the visually impaired, states that even in America, one of the most progressive countries in the world, the problem of blindness is increasing faster than the population. This phenomenon is due mainly to the fact that people are living longer than they formerly did. Blindness seems to be a function of age, as well as of the insufficient awareness on the part of the general public concerning tests and cures which are available and which can alert persons to oncoming blindness in time for them to take preventative steps.[1]

Even now, in spite of these discouraging and bleak figures,

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[1]Edward Jablonski, "Man's Conquest of Blindness," The American Legion Magazine (December, 1965), p. 18.

there exists a marvelous and practically unrelated story. Man has made and is continuing to make far-reaching advancements in the direction of a mediating victory over the handicaps due to blindness. Training the blind population in orientation and mobility within their environment is one of the positive steps which can be taken toward helping them to rise above and to conquer their problems.

CHAPTER I

ORIENTATION AND MOBILITY DEFINED

The words "orientation" and "mobility" have very often been used interchangeably by writers of professional literature in the field. This has had the unfortunate tendency to add a note of confusion for those trying to read the literature in these two areas. The meaning usually ascribed to these two widely used terms indicates that it is possible for the blind person to navigate within a certain surrounding. "Orientation" is considered to be a cognitive competency enabling the blind person to know in his mind where he is in regard to both his immediate and his more distant surroundings. Lowenfeld states that mobility contains two component parts: physical movements and mental orientation.[1] Physical movement is the ability of the individual to move from place to place by means of body movements.[2] Mental orientation is the ability

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[1]Berthold Lowenfeld, "Psychological Foundation of Special Methods in Teaching Blind Children," in Blindness, ed. P. A. Zahl (Princeton, New Jersey: Princeton University Press, Reprint Edition, 1963), p. 91.

[2]Dictionary of Psychology, ed. Howard C. Warren (Boston: Houghton Mifflin Company, 1934), p. 154.

of the person to recognize his environment and his relationship to this environment.[1]

For the individual who is totally blind or who perhaps has only light perception, the task of moving about in his environment is indeed a difficult one to perform. According to Chevigny and Braverman, the most intricate expression of competency for the blind individual is his ability to navigate in his environment and to do so independently.[2] The area of mobility is lacking in research pertaining to the psychological factors which are involved. Research was conducted at the beginning of this century on obstacle perception by European scientists. Supa, Cotzin, and Dallenbach, circa 1940, did some work on obstacle perception in this country.[3] Facial vision or obstacle perception appears to be only one of several factors of prime importance to the blind individual and his ability to get around in his environment.

"There are enough unanswered questions about mobility of blind children to keep research centers busy for years."[4]

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[1]Ibid., p. 189.

[2]Hector Chevigny and S. Braverman, The Adjustment of the Blind (New Haven: Yale University Press, 1950), p. 3.

[3]M. Supa, H. Cotzin, and K. M. Dallenbach, "Facial Vision, The Perception of Obstacles by the Blind," American Journal of Psychology, LVII (1944), 133-83.

[4]Ibid., p. 32.

Ashcroft states in regard to research in the field for the visually handicapped, "A new era in research is needed to match the new era in education."[1] "Investigators believe. . . the general situation in regard to travel performance disclosed by their study challenges the whole field of service to blind persons."[2] Research is needed in the area of mobility for the blind in order to produce some answers concerning what kind of a program is needed to help the blind population become more mobile.

Definition of Terms Related to Orientation and Mobility

IQ.--The measurement and appraisal of individual intelligence, as contained in the subjects' case files.

Additional physical disabilities.--The presence of other physical disabilities as noted in the medical record, other than vision, as given in the subjects' case files.

Mobility.--The term used to denote the ability to navigate from one's present fixed position to another part of the environment.[3]

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[1]Ashcroft, op. cit., p. 88.

[2]Seeing Eye, Inc., The Importance of Mobility to Blind People and the Potential Need for Dog Guides, A Summary of the Major Findings of the Demand for Dog Guides and the Travel Adjustment of Blind Persons (Columbia University: Research Center of School of Social Work, 1960), p. 4.

[3]Stanley Suterko, "Orientation and Mobility Terms," (Hines, Illinois: Rehabilitation of the Blind, VA), p. 2. (Mimeographed.)

Mode of Mobility.--The method used by the visually impaired to navigate from one position to another part of the environment. Individuals in this study used the cane, dog guide, or human guide as a mode of mobility.

Family attitude toward mobility training.--Whether the family attitude toward travel training and travel was supportive or non-supportive, as measured by the attitude scale shown in Appendix B.

Psycho-social adjustment.--Absence of personality manifestation which may appear to stand in the way of the individual's adjustment, as measured by the Bauman Scale.

Useful travel vision.--Visual acuity of 2/200 down to total blindness is not considered useful travel vision.

Cane travel.--When the principle mode of mobility is the use of the cane.

Dog guide travel.--When the principle mode of mobility is the use of the dog guide.

Human guide travel.--When the principle mode of mobility is a seeing individual used as a guide in travel.

Dependent.--Relying on someone besides oneself for support in all areas of life.

Independent.--One who controls or governs himself in all areas of life.

Mobility independence.--The ability to travel from place to place with the aid of a dog guide or a cane.

Mobility dependence.--The ability to travel from place to place with the aid of a human guide.

Orientation.--The process of utilizing the remaining senses in establishing one's position and relationship to all other significant objects in one's environment.[1]

Legally blind.--According to the medical definition of blindness, a person is blind if he has central visual acuity of 20/200 or less in the better eye with corrective glasses; or central visual acuity of more than 20/200 if there is a field defect in which the peripheral field has contracted to such an extent that the widest diameter subtends an angular distance no greater than twenty degrees.

Partially seeing.--Individuals with visual acuity of 20/70 to 20/200.

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[1]Ibid.

CHAPTER II

REVIEW OF THE LITERATURE OF ORIENTATION AND MOBILITY WITH VISUALLY IMPAIRED INDIVIDUALS

In reviewing the proceedings of the American Association of Instructors of the Blind biennial conventions, this writer found that from the years 1853 to 1887 no mention was made of the teaching of methods of mobility in order to facilitate the blind child's navigation in his environment. In 1888, Swann reported to the Convention on the results of a study made on facial perception. He postulated that use of skin perception was achieved better by the totally blind individual, and the degree of hearing in the individual did not affect this facial perception.[1]

In 1910, Henderson presented a paper on the practicality of gymnastics and other activities used in physical education. Henderson urged the practice of gymnastics for a period of at least thirty minutes per day in order to improve the blind child's carriage, facilitate his locomotion and orient him to

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[1]R. W. Swann, Proceedings of American Association of Instruction of the Blind, Biennial Convention (Baltimore, 1888), pp. 31-38.

directions of up and down, forward and backward, to each side, as well as in and out. Henderson averred that such practice would improve the blind child's ability to get about.[1]

In 1930, Cox reported to the convention that the very nature of blindness itself caused the blind youngster to maintain a tense posture, and that this tenseness is due in part to an unconscious desire to protect himself from any possible bodily harm inasmuch as he cannot see what is taking place in his environment.[2] Cox maintained that methods should be employed to build the self-confidence of the blind child through appropriate training from a teacher who is interested in the needs of the blind individual.

In 1934, Kappes addressed the convention on the matter of rhythm and the blind child. She discussed the problems relating to muscles, space, and time, and their relationship to rhythmic training. Kappes reiterated earlier workers in the field that the blind child should be helped to overcome the limitations of his experiences, namely that these limitations are due in part to the difficulties which he has in moving about in his environment and to the problems which he

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[1]Olivia Henderson, Proceedings of American Association of Instructors of the Blind, Biennial Convention (1910), pp. 78-81.

[2]A. H. Cox, Proceedings of American Association of Instructors of the Blind, Biennial Convention (1930), pp. 538-41.

has in manipulating objects in relationships to his environment.[1]

In 1938, Landis reported to the convention on his twelve stages of specialization in which he contended the blind child could participate in athletics. Landis felt that athletics was the medium through which the blind child could best increase his abilities to orient himself in his environment and to overcome the problem of mobility for himself in his environment.[2]

After reviewing a number of American Association of Instructors of the Blind convention proceedings, this writer concluded that prior to 1887 little if any attention was paid to the problem of orientation and mobility in the training of the blind child. As one reads the convention proceedings after this date, a gradual awareness of the need for orientation and mobility training for the blind child becomes noticeable. Many of the practices, activities, and techniques suggested earlier precluded the use of the more exact and precise techniques employed and utilized today in training the blind child in orientation and mobility.

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[1]Marion Kappes, Proceedings of American Association of Instructors of the Blind, Biennial Convention, (1932), pp. 789-92.

[2]Merle B. Landis, Proceedings of American Association of Instructors of the Blind, Biennial Convention (1938), pp. 91-96.

CHAPTER III

DEVELOPMENT OF DOG GUIDE TRAINING

The development of modes of mobility for the blind has largely followed the trial and error method of experimentation and has, therefore, been productive of empirical evidence as to the different modes of mobility for the blind which are presently used. One such mode is the use of a dog guide.

According to Coon, a book was written and published in 1856 by a blind man, Abram V. Courtney, who was one of the early pupils of the Perkins school. This blind man did not want to be an object of charity so he went to the Perkins school in 1851. There he selected a dog which was part Newfoundland and part Spaniel. This dog seemed to know that his master was blind and was careful to keep him away from all danger. He learned by name the different shops and other places his master wished to go. For example, if the dog's master told him to go to the barber shop, the dog took him there. However, the dog was in the habit of going to certain places with his master and so he was able to learn the way to different places. The dog did not possess the intelligence to take his master to

a new place where the dog had never been before simply upon being given a name of a desired destination by his master. Dogs are, however, able to learn their way to different places after having been there several times. This blind man had trained his dog in the techniques of being a dog guide.[1]

According to Chimani there is an account telling that in 1755 in Vienna a young man of seventeen years of age lost his sight. Not wishing to beg for his needs, he secured a dog and trained him to act as his guide. By sharing his food with the dog and keeping him at his side, he trained the dog to guide hime every place he wanted to go, to show him where to walk, and to avoid curbs, stairways, and other obstacles. The blind man married but never allowed his wife to act as his guide. He continued to keep his dog guide with him wherever he went, and it was said that his dog took him safely through heavy traffic where sighted people would hesitate to go. This blind man, Joseph Reisinger, always trained another dog guide when his present dog died or became too old to continue hisservice. He trained several dog guides for himself during his life time.[2]

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[1]Nelson Coon, A Brief History of Dog Guides for the Blind (Morristown, New Jersey: The Seeing Eye, Inc., 1959), p. 40.

[2]Leopold Chimani, Curiosities of Lands, States, and Peoples of the Austrian Empire (Vienna: Bell, 1827), Archives of Perkins Blindiana Collection, Blindiana Reference Library, Perkins School for the Blind, Watertown, Massachusetts.

Early methods of training a dog guide can perhaps be partly attributed to Reisinger. The invention of the rigid harness and a rigorous pre-trained schedule by a sighted person can most likely be credited to Father Klein of Vienna. In 1819, Father Klein, in his Textbook for Teaching the Blind, sketched an outline for training dogs as dog guides for the blind.[1]

In 1845, in Germany, one blind man, Jacob Birrer, gave an account of how he trained a dog guide. Nageli reported that Birrer used different breeds of dogs, but he finally decided the poodle was the best kind to use. Jacob Birrer learned that in training the dog, if the dog made a mistake, he should not be punished. Repetition is always the best method in training a dog. The blind person should not allow a sighted person to help him in the training of the dog. The dog soon learns that the blind person depends upon him entirely. The dog is taught to stay always in front of the blind person while the leash is kept taut. Birrer started the training by going to a grove of trees well known to himself. If the dog went too close to a tree, he would draw the leash around the tree and then pull the dog around the tree. Of course, this was not pleasant for the dog so he soon learned not to

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[1]The New Outlook for the Blind (April, 1956), pp. 131-33.

get too close to obstructions.[1]

Next, according to Nageli, Birrer took the dog along a street where he knew there would be holes and also rocks in the street. After the dog learned how to avoid these things, he was rewarded. Sometimes, if the dog did not grasp what he was to do, he would be punished very slightly.[2]

It was further found in the training method that a dog does not like to be kept indoors and when the door is open, he is liable to jump through the door quickly. He must be corrected in this instance and not allowed to form this bad habit. To correct the habit an obstruction can be put across the door opening so that this has to be moved before he can get through.[3]

According to this account a number of different breeds of dogs can be used by blind people. It was felt by Birrer that the poodle can be trained easily, but that this breed of dog is sensitive and must not be punished while being trained. Talking kindly, coaxing them, and rewarding them with tidbits

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[1]N. Nageli, Erinnerungen, Mersurdige lebensfahrten und besondere ansichten das Jakob Birrer aus dem Kanton Luzern: Recollections, Remarkable Journeys and Various Opinions of Jacob Birrer (Carlsruhe: Melsch un Vogel, 1845), Archives Perkins Blindiana Collection, Blindiana Reference Library, Perkins School for the Blind, Watertown, Massachusetts.

[2]Ibid.

[3]Ibid.

is the best method to use, as discovered by Birrer.[1]

Birrer felt that the Spitz was another breed of dog that trained well. The Spitz was stronger and did not tire easily. Birrer felt that in selecting a dog it should not be too old. Ten to sixteen months was the best age.[2]

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[1]Ibid.

[2]Ibid.

CHAPTER IV

THE CANE AS A MOBILITY DEVICE FOR THE BLIND

One of the earliest written cases of blindness is in the Bible where the account tells of Isaac's having become blind. There is no evidence of his having used a cane, but it is possible that he used a shepherd's staff. It is written in various parts of the Bible that the blind walked alone, and they probably used some kind of a stick. Greek mythology gives an account of the prophet Tiresias who was deprived of his sight because of an offense towards the gods and was pitied by the Goddess Charicle. She gave him a stick with which he learned to walk as well as he had before he lost his sight.

During the 1800's various well-known writers explained different ways that canes could be used to help the blind move about more efficiently and with less danger to themselves. At no time did any person or group of people figure out a definite technique or set of rules involving the use of the cane which could be used to help a large number of handicapped people. In spite of this, during this period the cane was used by individuals as a safe and satisfactory way for the blind to

move about. This success, in large measure, could be attributed to the absence of fast-moving vehicles so common today.

It seems that there is still great need for a better and safer method by which the blind person can have more and safer means of mobility. Such a method would give the person more confidence and lessen the danger as he travels about. He would also be less conspicuous.

History records the many uses in which the cane or stick have been of great help to the people who have had to use them. The cane used to be made from various kinds of wood, but now metal canes seem to be more acceptable. History tells us that the cane or stick was used in many different ways. Some used it mostly to keep stray dogs or other kinds of animals away from them. Then the blind people would make a loud noise with the cane by tapping on the walks so that people or animals would give them the right of way.

According to Hoover the first time any organization attempted to set up a program to teach the blind how to move about without assistance was during World War II. The Medical Division of the United States Army selected several of their hospitals and ordered them to set up a program and training division to rehabilitate and train the blinded veterans. These veterans also demanded that they be trained so that they could be independent in moving about in society. The first program was teaching the blinded veterans how to use the

white cane. Hoover and his associates soon discovered that this was not adequate, and the program was still filled with hopes that their methods would be improved.[1]

Hoover said cities have passed laws giving the blind people the right of way when they point their cane in the direction they wish to go. These laws that have been passed by many states are known as White Cane Laws.[2]

Blind children of elementary school age can be easily taught the use of the cane, and they are usually happy to be instructed in the use of any type of cane that gives them an adequate degree of mobility for themselves. Some girls of high school age who live at the state schools for the blind and who have been led around find that after they leave these state schools they are handicapped because they have no adequate means of mobility. When they are told about using the cane so that they can be independent, they seem to think that it would be impossible for them to use a cane. They think of the cane as a large, heavy stick. They also picture themselves in the role of a beggar walking along pounding a heavy stick. In his report, Hoover said the younger girls are easier to manage in regard to using a cane as a mobility

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[1]Richard E. Hoover, "The Cane as a Travel Aid," (Western Michigan University, Center for Orientation and Mobility of the Blind). (Mimeographed)

[2]Ibid.

device, and there is no problem in teaching them to use a cane properly. He also states that when adult women become blind, it is quite difficult to induce them to accept training with a cane to make them independent.[1]

Being taught the proper way to use a cane is as necessary as any part of the educational program, Hoover believed. The proper use of a cane or some mobility device is essential to the rehabilitation of any blind individual. The very young or the old should receive the same careful education in the use of the cane as a mobility device.

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[1] Ibid.

CHAPTER V

THE HUMAN GUIDE AS A MOBILITY DEVICE

According to Jablonski, in a certain section of Africa there is a river disease that causes many natives to go blind. These blinded people are led by sighted people wherever they need to go. In this instance the individuals who take this role of human guides are children. A long pole is held in the hand of the blinded adult while the child grasps the pole at the other end. In this manner the child leads the blinded adult wherever he has to go. As these children grow older they in turn contract the same disease, and they must then be led by another sighted child.[1]

In the early part of the present century, few, if any, of the blind population in this country traveled extensively alone. According to Voorhees, in those days and even so today, the blind person who employed a human guide usually did so for one of several reasons--that they did not possess the necessary confidence to travel alone, that they did not have the

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[1]Jablonski, op. cit., pp. 18-21, 35, 38-39, 41.

opportunity to develop their own skills in mobility in the earlier days, or that a sighted individual was accessible to fulfill the role of the human guide whenever a means of mobility was needed.[1]

Most writers in the field agree the blind have felt the need for some kind of a mobility device since early times. The use of a mobility device by blind persons makes it much easier for them to get about in their environment.

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[1]Arthur Voorhees, "Professional Trends in Mobility Training," Standards for Mobility Instructors (New York: American Foundation for the Blind, Inc., 1962), pp. 11-23.

CHAPTER VI

FACIAL VISION OR OBSTACLE PERCEPTION

According to Jerome and Proshansky, obstacle-sense is a term which is commonly used when referring to the sensory system by which means selected blind individuals are supposed to have the ability to sense obstacles in their environment while they are still some distance away from these obstacles.[1]

James talked to certain selected blind individuals concerning obstacle perception. After his discussion and upon doing some experiments with blind individuals, he reached the conclusion that obstacle perception could be attributed to tympanic pressure.[2]

Villey conducted an extensive study of newly blinded French veterans from the First World War. He reached the conclusion that "facial vision" could be attributed to auditory clues of

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[1]Edward A. Jerome and Proshansky, "Factors in the Assay and Use of Guidance Devices," Blindness, Modern Approaches to the Unseen Environment, ed. Paul A. Zahl (New York: Hainer Publishing Company, 1950), pp. 462-94.

[2]William James, Principles of Psychology (New York: Henry Holt and Company, 1890).

a threshold or near threshold magnitude. Villey found that roughly 80 per cent of these blinded French veterans demonstrated they had obstacle sense. Upon further questioning it was found that most of these blinded veterans felt that they had had obstacle sense before they became blind. They further felt that after they had become blind they had a greater need for the obstacle sense and this had caused them to develop it more.[1]

Hayes in 1935 did some experimental work which was the first of its kind designed to attempt to discover the sensory origins of the so-called obstacle sense. In this study the obstacle perception of blind and sighted subjects was compared. This study assumed that the blind are able to sense objects a greater distance from them than the sighted persons could.[2]

Supa, Cotzin, and Dallenbach conducted an experimental study in 1944 on obstacle sense. They used two blind subjects and two sighted subjects. They varied Dolanski's techniques by moving their subjects forward toward the objects.[3] Dolanski in his study on obstacle sense kept his subject at a standard-

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[1]Pierre Villey, "Le sens des obstacles chez les aveugles de la guerre," Rev. Phils. (1923).

[2]Samuel P. Hayes, Facial Vision or the Sense of Obstacles, Publications of the Perkins Institute (Watertown, Massachusetts, June, 1935).

[3]Supa, Cotzin, Dallenbach, op. cit., pp. 133-83.

ized position from one trial to the next.[1]

Worchel and Dallenbach conducted a study in 1947 on subjects who were partially sighted and partially deaf. The conclusion of the study was that the deaf-blind do not have obstacle sense. The conclusions of the study done by Supa, Cotzin, and Dallenbach show that those who are not deaf do in fact have obstacle sense. The conclusions of these two studies make a strong plea for the idea that obstacle sense does in fact depend on auditory clues from the environment.[2]

There seem to be two noticeable limitations in all of these studies on obstacle perception. The tests were done indoors and therefore in very limited types of environment; furthermore, the studies were conducted with a very small number of subjects.

In conclusion, these studies generally favor the idea that obstacle sense is dependent on some kind of auditory cues. The more acute the hearing of blind persons, the more apt they are to possess obstacle sense.

The results of these studies show that there is a significant relationship between the auditory performance or

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[1]W. Dolanski, "Les Aveugles possedent-ils le sens des obstacles?," Annee Psychol., XXXI (1930).

[2]P. Worchel and K. M. Dallenbach, "Facial Vision: Perception of Obstacles by the Deaf-Blind," American Journal of Psychology, LX (1947), 502-53.

thresholds and the mobility performance of the subjects in the studies. The more ability the blind person has to hear the auditory frequencies above the speech range, the greater was his mobility performance in these studies. It was suggested that the frequencies above the speech range were as important to the blind individual as the speech frequency of hearing range. It was further suggested that rehabilitation programs for adults take into consideration the persons' abilities to hear in the high-frequency ranges, and that in the future existing techniques used in mobility training may have to be modified to fit the blind persons' abilities to hear the ultra-speech frequencies.[1]

Supa, Cotzin, and Dallenbach[2] and Cotzin and Dallenbach[3] found from the experiments which they performed on an adult blind group that the changes in pitch as perceived by their subjects, especially in the sounds which ranged in frequencies above the 10,000 cycles par second range, gave the blind subjects the best clues.

Carroll says that for a blind person a hearing loss in

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[1]Leo H. Riley, David M. Luterman, and Marion F. Cohen, "Relationship between Hearing Ability and Mobility in a Blind Adult Population," The New Outlook for the Blind (May, 1964), pp. 139-41.

[2]Supa, Cotzin, and Dallenbach, op. cit., pp. 133-83.

[3]M. Cotzin and K. M. Dallenbach, "Facial Vision: The Role of Pitch and Loudness in the Perception of Obstacles by the Blind," American Journal of Psychology, LXIII (1950), 485-515.

one ear may be as serious as a hearing loss in both. This inequality in the hearing ability between the person's two ears may alter his judgment of direction of sound and so affect his orientation performance.[1]

According to Jerome and Proshansky from the studies that have been conducted, testing and training in obstacle perception in all of its forms such as pressure, aural, and temperature should be undertaken rigorously and seriously by institutions concerned with training blind persons.[2]

According to Wright, experience with those who have impaired hearing shows that auditory training does improve the ability of some blind persons to identify sounds not previously recognized. It would seem reasonable, therefore, to assume that if a visually handicapped traveler's ability to employ auditory information is related to mobility competencies, systematic training of the auditory sense should result in an improvement of his mobility or travel skill. Wright lists four factors which make it possible to distinguish among sounds and thus will be used by the blind person to identify a particular sound. These factors are: (1) loudness,

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[1]Thomas J. Carroll, Blindness, What It Is, What It Does, and How to Live with It (Boston: Little, Brown, and Company, 1961), pp. 134-43.

[2]Jerome and Proshansky, op. cit., pp. 462-94.

(2) pitch, (3) quality, and (4) temporal pattern.[1] Thus, it would seem that a systematic approach to auditory training for travel would result in a greater possibility of better mobility skills for the individual.

Hunter conducted a study on space perception in both blind and sighted children. He used twelve congenitally blind children and twelve sighted children matched in age, sex, and IQ. He concluded that the blind lack the ability to use various types of stimuli to the same degree that the sighted do, and that the blind require more training in manipulation of objects and need much encouragement during their initial training.[2]

Winer conducted a study with twenty-two blind adults in 1962. He discovered a positive correlation between their personal adjustment and intelligence by using auditory cues.[3]

Mickunas and Sheridan conducted a study with blind subjects in 1963. This study disclosed that they had developed an obstacle course they had used successfully in evaluating mobility performance in these blind subjects.[4]

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[1]Herbert N. Wright, "Principles of Auditory Training for Travel," Proceedings of the International Congress on Technology and Blindness (June, 1962), pp. 149-56.

[2]William F. Hunter, "An Analysis of Space Perception in Congenitally Blind and in Sighted Individuals," (Study based on a doctoral dissertation, Michigan State University, 1960).

[3]David Winer, "The Relationships among Intelligence, Emotional Stability, and Use of Auditory Cues by the Blind," Research Bulletin, III (December, 1962), 88-93.

[4]J. Mickunas and F. Sheridan, "Use of an Obstacle Course in Evaluating Mobility of the Blind," Research Bulletin, III (August, 1963), 35-54.

Riley, Luterman, and Cohen conducted a study in 1964. They found a significant correlation between the mobility performance and the hearing ability in the blind subjects tested.[1]

These studies seem to show that the better the blind subject's hearing the better his mobility performance may be expected to be. Only one study used the ability to distinguish auditory cues as an indication of higher intelligence and better personal adjustment.

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[1]Riley, Luterman, and Cohen, op. cit., pp. 139-41.

CHAPTER VII

PSYCHOLOGICAL ASPECTS RELATING TO MOBILITY IN BLIND INDIVIDUALS

According to Lowenfeld, psychological problems in the blind person may be caused by any of the following variables or the interaction among and between these variables:

1. Cognitive or objective variables in the blind.
    a. Limitation in the range and the variety of experiences.
    b. Limitation in the ability to get around.
    c. Limitation in the control of his environment in relation to himself.
2. Subjective variables.
    a. The amount of residual vision the person has.
    b. The age of the onset of the blindness.
    c. The cause of the blindness.
    d. The nature of the blindness.
    e. The present eye condition.
3. Social variables.
    a. The attitudes of others toward the stereotypes and misconceptions of blindness.

b. The blind person's reaction toward society.

The interaction of these three groups of variables may or may not cause psychological problems.[1]

An article by Gockman about the orientation and mobility of blind persons at the Catholic Charities of the Archdiocese of Chicago, which was started in August, 1962, states that this program includes junior and senior high school students. This program followed very closely the mobility program for impaired veterans at the Veterans Hospital in Hines, Illinois.[2]

The success of this orientation and mobility program depended almost entirely upon parental attitudes. Children reflected the doubts and fears of parents who were over-protective. In the thinking of the parents, the child is incapable of becoming independent because he is blind.[3]

According to Gockman the conditions as they exist are as follows:

Attitudes.--It is necessary before beginning training to learn the attitude of the parents. In many cases the attitudes of the parents are negative. A child may be plagued all of his

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[1]Berthold Lowenfeld, "Psychological Problems of Children with Impaired Vision," Psychology of Exceptional Children and Youth, ed. William M. Cruickshank (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963), pp. 226-310.

[2]Robert Gockman, "The Importance of Parental Influences upon a Program of Orientation and Mobility for Children," Long Cane News, I, No. 4 (1966), 6-8.

[3]Ibid.

life by living in an atmosphere with an attitude that blindness is a handicap or affliction that will always mean a life of total dependency.

Aspirations.--The question may arise concerning what parents of a blind child feel he is capable of learning from mobility training.

Observations.--Most often a child will meet the expectations that are established by his parents. If parents of a blind child have a positive attitude and do whatever possible to support him in his training in mobility and orientation, he may be successful and be able to measure up to their expectations.[1]

Opportunities for gaining experiences.--The parents should help the blind child become independent and not be fearful that he may be harmed or injured. A great deal may be gained through playing and entering into activities with the family. It is most imperative that a blind child start at an early age in mobility training, for his entire future depends on it.[2]

Much can be accomplished through meetings with parents of pre-school blind children at which qualified persons from various departments, such as social service, counseling, and

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[1] Ibid.

[2] Ibid.

guidance, as well as teachers of mobility and orientation, are present. Parents are most anxious to be in a group of this kind and much benefit can be gained where their problems and interests are the same.[1]

Authorities generally agree in the field of orientation and mobility that success can depend to a very large extent upon parental attitudes. Therefore, a training and counseling program is necessary for the parents of blind children. In some communities the local agencies will assist in a program to acquaint parents with the program to prevent any development of negative attitudes. This would, of course, be a wise procedure to follow. As the needs of blind children are becoming more evident, educational institutions are adding services to their already existing programs or are creating new programs in an attempt to meet the total needs of blind children in modern society.[2]

In "Restoration of Skills That Are Basic to Mobility," Carroll says the loss of mobility is the greatest of all the factors which go to make up the life of the blind. The restoration of mobility must be gained as much as possible so that the blind persons can lead a normal life. This is the objective in the rehabilitation programs.[3]

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[1] Ibid.

[2] Ibid.

[3] Carroll, op. cit., pp. 134-43.

In 1929, The Seeing Eye, Incorporated, was the first hope of encouragement to improve mobility for the blind by using the dog guide. The United States Veterans Bureau later developed the cane technique known as the Hoover cane technique. According to Carroll, the cane technique was developed by the Veterans Administration for the rehabilitation of veterans who were blinded. This technique has been very helpful in theory and practice in aiding mobility therapy.[1]

Professional training is most necessary for a mobility therapist in Carroll's opinion. The mobility therapist field has been growing so fast that it is possible to find untrained persons who volunteer to help blind persons to get around. This could be serious as a therapist is responsible for the life and safety of any blind person he may be helping, so it stands to reason that the therapist should surely have training.[2]

Carroll believes that soon all trained and competent therapists must have a license in order to practice. It is wise for families to be aware and to be sure that a mobility course is under a well-trained therapist.[3]

Western Michigan State University, Boston College, and San Francisco State College are graduate schools offering

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[1] Ibid.

[2] Ibid.

[3] Ibid.

courses with degrees in peripatology or degrees that designate the individuals as mobility specialists. The Rehabilitation Services Administration is supporting this effort at the college level.[1]

Restoring lost mobility has many problems attached to it. The blind must understand his destination and in what direction it is that he wishes to go, and that it is possible. He has to understand the obstacles along the way. In mobility training, the blind person learns to use his remaining senses and with the mode of mobility he extends the ability of the remaining senses. Newly blinded persons are likely to have neurotic fears and panics. These problems may be overcome in the mobility training. The person gets support and realistic hope and soon he discovers that he is regaining his mobility.

Carroll makes the following value judgment: The orthopedic cane and the human guide are dependent means of travel. The dog guide and the cane with, of course, proper technique, are independent methods of travel.[2]

The human guide also needs training while the blind person is learning to use this means of independent mobility. It is considered a better arrangement, if possible, to have a

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[1] Ibid.

[2] Ibid.

paid human guide rather than the spouse or members of the family. A paid guide would eliminate disrupting the normal family schedule. If a member of the family is used as a human guide, the blind person may feel a sense of guilt; with a paid guide he would have a sense of independence.

According to Sommers, five rather distinct kinds of parental attitudes can be identified. They are: (1) accepting the child and the handicap, (2) denial that the handicap makes any difference in the child's performance, (3) overprotectiveness, (4) disguised rejection, and (5) open rejection. These five categories cannot be strictly separated, but they do, in fact, overlap and vary both in degree as well as intensity.[1]

An interesting comparison can be made between the five kinds of parental attitudes found by Sommers and the types of parental attitudes which Kenner distinguishes as being in operation for all children in general; these (listed in the order of those of Sommers above) are: (1) acceptance, (2) perfectionism, (3) overprotection, (4) rejection, and (5) overt hostility.[2]

According to the study by Finestone, Lukoff, and Whiteman, who completed a very extensive research dealing

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[1]Vita Stein Sommers, The Influence of Parental Attitudes and Social Environment on the Personality Development of the Adolescent Blind (New York: American Foundation for the Blind, 1944), pp. 49-63.

[2]Ibid.

with the area of demand for dog guides, those persons who used human guides were minimal in their travel performance, those using the cane technique reached a midway level and were well above those who were human guide users, and those who were dog guide users were markedly superior to those in both of the other groups.[1]

Most writers in the field feel that acceptance of the blind child by the parents is a vital factor in the blind child's adjustment. Most writers in the field also feel that a loss of mobility is a severe blow to the life and activities of the blind person. Family interest in and approval of mobility training with an appropriate mobility device is of vital importance in the adequate adjustment of the blind person.

The use of the cane or dog guide is the independent mode of mobility. The use of the human guide is the dependent mode of mobility.

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[1]Samuel Finestone, Irving F. Lukoff, and Martin Whiteman, The Demand for Dog Guides and the Travel Adjustment of Blind Persons (Columbia University: Research Center, New York School of Social Work, 1960). The Seeing Eye, Inc., of Morristown, New Jersey, contributed funds for this research project.

CHAPTER VIII

PERSONALITY

Personality includes the psychological and physical aspects of the organization of the person as modified by the experiences which he meets in life and, therefore, personality includes the environmental, as well as the hereditary, agents. The congenitally blind child experiences the world about him in a way of his own that is different from the way in which his sighted peers experience the world about them. The blind child must contend too with the unique problem of getting around. The child's personality is influenced by these instances. One can assume that because of his handicap he is probably under a greater strain and may, therefore, maintain feelings of frustration, as well as those of insecurity which surpass those experienced by most of his sighted peers.

According to Buell, overprotective attitudes on the part of parents are very detrimental to visually handicapped children. He concludes that "as far as motor performance is concerned, parental neglect is to be preferred to overprotection."[1]

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[1]Charles Edwin Buell, Motor Performance of Visually Handicapped Children (Ann Arbor, Michigan: Edwards Brothers, 1950).

He further stated that one could not emphasize too strongly the harm that could be done to blind children by the over-protective type of parental attitude.[1]

Blank discusses the possibility of unconscious conflicts concerning blindness which may confront professionals who are working in fields to help the blind. Blank feels that psychoanalytic consultation should be made available to all personnel working with blind individuals and in services to the blind; however, he warns against leaning on psychoanalysis as a universal panacea.[2]

Murphy conducted a study to determine the attitudes of educators and special educators toward the visually handicapped. The teaching of visually handicapped children was placed by the special educators in a more approving position than the teaching of children with other types of handicaps.

In regard to teaching handicapped children, Murphy concluded that knowledge about a handicapped group tends to cause the educator to place those particular handicapped children in a more approving position.[3]

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[1] Ibid.

[2] H. Robert Blank, "Countertransference Problems in Professional Workers," New Outlook for the Blind, LII (May, 1958), 185-88.

[3] Albert T. Murphy, "Attitudes of Educators toward the Visually Handicapped," The Sight-Saving Review, XXX (Fall, 1960), 157-61.

Rusalem suggests that Murphy's study should be accepted with caution because other more subtle factors than the handicap may be operating to cause educators to make the decisions they did. He suggests, for example, that educators may have the notion that braille is difficult; therefore, they prefer not to teach visually handicapped children because they themselves would not want to be confronted with learning braille.[1]

According to Cutsforth, who himself was blind, "Blindness changes and utterly reorganizes the entire mental life of the individual."[2] The frustration or support of this reorganization is what decides the effect the blindness has on the developmental growth of the personality.[3]

Jervis and Haslerud conducted a study using twenty blind adolescents and twenty sighted adolescents who were blindfolded. They attempted to reach some conclusions concerning frustration comparisons of the two groups. They concluded that the "large amount of overt emotional expression in the blind does not reduce tension."[4] They therefore recommended "the desirability

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[1]Herbert Rusalem, "Research in Review," The New Outlook for the Blind, LVI (1962), 66-68.

[2]Thomas D. Cutsforth, The Blind in School and Society (New York: American Foundation for the Blind, 1951), p. 2.

[3]Ibid.

[4]Frederick M. Jervis and George M. Haslerud, "Quantitative and Qualitative Differences in Frustration between Blind and Sighted Adolescents," Journal of Psychology, XXIX (1950), 67-76.

of promoting more direct outlets for tensions would seem indicated in the education of the blind."[1]

Brieland conducted a study in which he used eighty-four matched pairs of sighted and blind adolescents. He concluded that the blind subjects were inferior significantly to the sighted subjects in health, emotional and social adjustment, but the home adjustment showed no significant difference.[2]

Barker reviewed fifteen studies that had used different personality inventories. He found that six of these studies showed the blind to be more poorly adjusted than seeing groups, that nine of the studies showed no significant difference between the sighted and blind groups. He concludes in agreement with Sommers by questioning the validity of personality tests in research studies with the blind.[3] Most of the personality inventories were standardized on a sighted population, and the blind differ a great deal from the standardizing population. Many items in such personality tests may be interpreted very differently by the blind individual.

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[1] Ibid., p. 75.

[2] Donald M. Brieland, "A Comparative Study of the Speech of the Blind and Sighted Children," Speech Monographs, XVII, No. 1 (1950), 99-103.

[3] Roger G. Barker, Adjustment to Physical Handicap and Illness: A Survey of the Social Psychology of Physique and Disability (rev. ed.; New York: Social Science Research Council, 1953).

Cowen, et al., conducted a three-year research program with 167 adolescents who were visually impaired. The outstanding result of his study was that no consistent nor systematic variations in personality or adjustment characteristics were uncovered among any of the three major groups that were used in the study.[1] This study concludes that the findings "cast an important shadow of doubt on beliefs about inherent associations between visual disability and maladjustment."[2] This study also made an initial attempt at constructing a formula of prediction for adjustment. Along these lines the study found that the adolescent who feels that he is receiving a high degree of acceptance from his parents, who is perceived by his mother to be a well-adjusted adolescent and like other adolescents, and who also is from a fairly high socio-economic group, has a very high degree of likelihood of being a well-adjusted adolescent.[3]

Jervis conducted a study with twenty blind adolescents and twenty sighted adolescents. The fact that the blind adolescents tended ". . .to an extreme negative or an extreme positive attitude toward themselves would indicate

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[1]Emory L. Cowen, et al., Adjustment to Visual Disability in Adolescence (New York: American Foundation for the Blind, 1961), pp. 253-59.

[2]Cowen, et al., "Factors Relating to Adjustment to Visual Disability in Adolescence," The New Outlook for the Blind, LV (1961), 257.

[3]Ibid.

that they have difficulty in normal adjustment."[1]

The Cowen and Jervis studies tend to agree generally that there are no outstanding differences between the sighted and the blind adolescents when taken as a group. However, they agree that it appears the differences that do exist are individual differences.

Blank avers that congenital blindness may not necessarily be the cause of an age defect; however, traumatic consequences always follow when blindness occurs after the age functions have already developed. He stresses that since personality development is largely dependent upon "mother," psychotherapy to help the mother and to also help the rest of the family are imperative requirements before aiding the child.[2]

Cholden concurs with Blank in regard to the acceptance of blindness coming in stages.[3] The first stage can be "psychological immobility" followed by a stage of mourning. ". . .The patient must die as a sighted person in order to be reborn as a blind man."[4] After blindness is finally accepted as a

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[1]Frederick M. Jervis, A Comparison of Self-Concepts of Blind and Sighted Children, Guidance Programs for Blind Children, ed. Carl J. Davis (Watertown, Massachusetts: Perkins Institute for the Blind, 1959).

[2]H. Robert Blank, "Psychoanalysis and Blindness," The Psychoanalytic Quarterly, XXVI (1957), 1-24.

[3]Louis S. Cholden, A Psychiatrist Works with Blindness (New York: American Foundation for the Blind, 1958), pp. 49-57.

[4]Ibid., p. 76.

reality, the beginning of the adjustment to the situation and the way to rehabilitation opens for the blind person. As he comes to accept mobility training, he can again navigate in his surroundings and command his environment and himself in relation to his environment.

Writers in the area of personality and the blind generally conclude that, whereas blindness is the impairment of the senses, it affects the total individual in different ways. Many studies have not drawn due distinction between congenital and acquired blindness or between total and partial blindness. Writers generally conclude that further research is needed in the area of personality and the blind.

CHAPTER IX

ORIENTATION AND MOBILITY WITH VISUALLY IMPAIRED VETERANS

Bledsoe reports that in 1942 to 1944 the Surgeon General of the Army sent out a request to all soldiers experienced in working with blindness to enlist their help in setting up a rehabilitation program for blinded veterans. Mr. Hoover was one who answered the call and came to Valley Forge Hospital. Fifty soldiers who had been blinded in the war were sent to Valley Forge. These men were demanding something be done so that they could once again lead active lives. The opthalmologists in charge were just as anxious as the patients to see something done that would enable the men to return to an active life. Mr. Hoover, a practical man, started by teaching the blinded veterans foot travel and orientation to their environment. It was a great lesson in how to overcome a handicap. It soon became noticeable how remarkably they moved about their environment without canes. Hoover noted that the men appeared to be fearful of bumping into something, and so they were holding their hands back in an abnormal way. This accentuated the appearance of blindness

a great deal more than using a cane. Hoover blindfolded himself, then did much experimenting. He decided that a cane should be used as both a bumper and a probe. These newly blinded veterans had not had time to form any bad habits as blind individuals. Thus, Hoover, was able to try many techniques on this group of blind persons. The method Hoover offered was simple and has proved itself. This method has proved to be satisfactory for blind persons since this time; the cane technique has been modified very little since its conception by Hoover.[1]

Often a newly blinded person, after he has had mobility training in the cane technique, will regress to the use of the cane as a sighted person does, either as a support or a walking stick. The reason for this behavior is due to the blind person not wanting to be seen or noticed as being blind. This is why a simple demonstration is not sufficient, but a long training period and a very thorough course in handling the cane are required.[2]

According to Bledsoe, blind children going without canes in a familiar and controlled environment may be acceptable, and they may be able to do so quite efficiently, but everyone should be concerned over the danger to these children

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[1]C. Warren Bledsoe, "Resistance," The New Outlook for the Blind, XLVI (November, 1952), 245-50.

[2]Ibid.

when they drift into an uncontrolled and hazardous environment.[1]

According to Williams, due to the many war blinded veterans, it has been found that special therapeutic processes and rehabilitation techniques, besides medicines and opthalmologic care, are necessary to place these men back into the active streams of life. These patients are given special therapeutic treatment and a reorientation to their environment. In a rather rigid discipline the physical realities of blindness are brought home to these patients. With therapy before starting treatment, an estimate can determine the patient's chances for success. Precautions can be taken so the individual will not be confronted with situations greater than his capacity to endure. The therapy processes are not entirely vocational training but a transition process physically and emotionally. This process of training is to try to prepare the patient for a new launching into society with circumstances altered by his blindness, but with circumstances with which he has been trained carefully to cope.[2]

Writers in the care of rehabilitation for blinded veterans generally agree that mobility is of major importance in achieving the rehabilitation. Mobility training aids the blinded

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[1]Ibid.

[2]Russell C. Williams and Maxwell Flank, "Therapy for the Newly Blinded, As Practiced with Veterans," Journal of the American Medical Association, CLVIII, No. 10 (July 9, 1955), 811-18.

veterans in their re-entry into an active, productive life. Adequate mobility training places the blinded veteran more nearly in control of his environment and enables him to become independent.

CHAPTER X

ORIENTATION AND MOBILITY TRAINING WITH VISUALLY IMPAIRED CHILDREN

It is a recognized fact, say Gockman and Costello, that any program for blind children should emphasize training in orientation and mobility, or it is not a complete program. The instruction in this area must be fitted within the curriculum that is designed to meet the total needs of every blind child within the program. By means of the work accomplished by Hoover, who developed the efficient cane technique, and the work by Williams, who helped to direct a program which has been accepted for the rehabilitation of our blinded veterans, the way has been paved for an efficient program for the training in mobility and orientation of other blind individuals. This work can be applied to the orientation and mobility training of children also.[1]

Whitstock believes that it is necessary in the teaching

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[1]Robert Gockman and H. Joan Costello, Mobility Training for Junior and Senior High School Students, A Project Summary Delivered at the American Association of Instructors of the Blind Convention, Salt Lake City, Utah, June, 1966.

of orientation and mobility to children that the training be adapted to their individual interests, capabilities, needs, and environment. Mobility and orientation extend to the depth of human personality. Home and school need to assist in the total efforts to obtain the best results; therefore, a team approach is suggested. The blind child should have encouragement to develop many skills which will help him to broaden his physical and social competencies. The ideal environment for the child should be one in which he will have a desire to react as a whole human being; then he will develop the use of his potentialities to the maximum of his ability. Counseling is needed in order that the teachers and parents may be guided to understand themselves in their attitudes toward the blind child.[1]

A child's behavior reflects to a large degree the influence of those around him. According to Whitstock, overprotection or even affection may smother or distort his development to such an extent that he may never entirely overcome the effects of it. A blind child should have home and school responsibilities as he becomes capable of assuming them. The blind child should not be protected from all bruises and falls; these are part of the normal growing up processes and these experiences teach confidence and self-

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[1]Robert H. Whitstock, "Orientation and Mobility for Blind Children," The New Outlook for the Blind (March, 1960), 90-94.

reliance. Parents and teachers must strive to instill in the child confidence and self-respect. Bad posture, and rocking back and forth are quite common, but should be discouraged, as they set the blind child apart from other children. The blind child should be given the opportunity to make frequent contact with sighted friends and adults. Orienting the blind child to the location of his seat in the school room, as well as to the total environment of the school, is part of his basic training and should not be neglected. The blind child should be made independent in that he should be able to find his way after proper orientation around his school environment. The blind child, as a part of his orientation should be made aware tactually of different objects in his environment. As part of his school experience he can become aware of new objects in his environment, such as a truck, for example, by tactual exploration.[1]

According to Whitstock, there are many non-visual cues to help the child in location and use of landmarks. The odor of a bakery gives the blind person a clue as to what business he is passing. The noise of a train or the sound of a car may be a valuable clue as to location or to objects in the environment.[2]

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[1] Ibid.

[2] Ibid.

According to Whitstock, orientation and mobility should be started early in the development of a blind child. In this way, when the child reaches adulthood, orientation and mobility can have the greatest effectiveness in his social and economic life.[1]

Blindness, according to Miller, is not the only defect of blind children. Blind children have such physical defects as poor posture; they walk with a gait and swinging of arms which seem to be a manifestation of tension or uncertainty. These abnormalities are due to stress and strain.[2]

In training, Miller believes, the child has to be given enough confidence to know the ground will be there when he steps forward. When this assurance and confidence are obtained, the many abnormalities will gradually disappear. With mobility training and the proper use of the cane coupled with the proper philosophy, the difficulties of maneuvering correctly in the environment can be solved successfully. The use of the cane is a guide giving the necessary information for safe walking. With the cane the child becomes aware of many obstacles; he can check the exact place he is about to walk. Testing by the feet could not give the blind child the total amount of

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[1] Ibid.

[2] Josephine Miller, "Mobility Training for Blind Children; Possible Effects of an Organized Mobility Program on the Growth and Development of a Blind Child," The New Outlook for the Blind, XLVIII (December, 1964), 305-307.

information before the steps were taken. The cane provides clues, encouragement, and interest in his mobility. Training of the blind child with the cane technique provides him with a safe means of mobility. After learning this technique, the child continues to rely on his own skills, and he has the ability to be independent and develop into a well-rounded, mature individual. As time goes on there is nothing to prevent him from having many of the same experiences as the sighted child.[1]

It is necessary, according to Manley, for the student to know his surroundings and be able to be aware of his destination. The child should have gained a great deal of independence and should have received encouragement to become familiar with all the landmarks in the environment in which he wishes to travel.[2]

For the students who are poor travelers, Manley says, the classroom is a logical place for them to become familiar with an environment. They can become familiar with the design of the room, and the sound of the clock could be a landmark for a direction. With a little encouragement, the blind child will soon learn to locate the teacher's desk and his own seat.

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[1] Ibid.

[2] Jesse Manley, "Orientation and Foot Travel for the Blind Child," International Journal for the Education of the Blind, XII (October 16, 1962), 8-13.

The locations of these things should not be changed and after repeated journeys about the room, his memory of new locations in the surroundings will be a guide for him. If any changes are made, the student must be allowed to freely move around and explore for himself the changes which have been made.[1]

Walker reports that an organized program in mobility and orientation for the visually handicapped child is often neglected. It has been agreed by educators in this field to be a very urgent need and should be organized on a national scale.[2]

More time should be allotted to mobility and orientation. A survey which was conducted found that less than two hours per week were spent by each child on this important need for the complete education of the child.[3]

According to Walker, in order to have a well-organized program in orientation and mobility and travel skills, and in order to have the best results, a well qualified teacher is required. Many schools have only part-time programs. Classroom teachers, teachers in physical education, and even others, are attempting to teach these necessary skills. The well qualified teacher should also be a normally sighted person.[4]

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[1] Ibid.

[2] Don L. Walker, "Practices in Teaching Orientation, Mobility, and Travel," International Journal for the Education of the Blind, XI (December, 1961), 56-58.

[3] Ibid.

[4] Ibid.

Apparently the long cane for travel is considered to be the best standard tool for mobility; however, a few schools favor a short type of cane. Since there has been a diversified training program in many schools, experiences that can be helpful in setting up a standard program have been given. It is hoped that tentative standards will be set up as a guide for schools in planning their programs for orientation, mobility, travel training.

The national concern is to establish more permanent standards from results so far obtained and continue to do further research and study on the questions pertaining to orientation, mobility, and travel training. It would seem plausible to aver that some type of standards in this field for the training of visually handicapped children will be forthcoming in the near future.[1]

The purpose of the Jones study was to measure the mobility of the blind in regard to the relationships between individual factors and good or poor mobility competency. The study was done in two parts. The subjects used were twenty-five totally blind adolescent boys from a residential school. The results of this effort showed there was no correlation between the intelligence and mobility of the subject. The study further showed no correlation between mobility and the causes of

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[1] Ibid.

blindness, chronological age, onset of blindness, and certain areas of personality. Jones did find a correlation between mobility and attitudes toward blindness, freedom from the withdrawing tendencies, a feeling of belonging, the subject's physical fitness, family relations of the individual, and self-reliance.[1]

This study shows that mobility in the blind adolescent correlates with some significant factors. This study should not be used in drawing basic conclusions for use as the study included only one program, only a residential setting was included, only twenty-five subjects were used, only adolescents were used, and the subject sample included only boys.[2]

The writers in the area of mobility training for children generally concur that there is a strong need for such training in this area and that the need for some standards is important. Most writers in this area state that more research is needed in this field so that conclusions for standards can be found.

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[1]Gideon R. Jones, "Some Factors Affecting Mobility of Blind Adolescent Boys" (unpublished Doctoral Dissertation, Wayne State University, 1963).

[2]Ibid.

CHAPTER XI

VIEWING MOBILITY

Program planners for the blind must understand the real effects of blindness and the special needs of the blind, and the many steps required for the adjustment of the blind person. In planning the educational and rehabilitation programs, the workers in this field are very much aware that training is necessary if the blind are to have enough self understanding of their sensory capabilities to make up for the functions which sight would give them. Mobility is one of the most important activities which will be involved in every part of the blind person's life. There are many differing viewpoints in the field as to devices for mobility. Great care must be given to place careful focus on the needs and capacities and the environmental demands of the blind person.

According to Ball, the need of mobility for the blind was recognized a century ago. Perhaps the human guide and the stick or cane were the first aids in mobility for the blind; the dog was used as a companion at first, then it was found that dogs could be trained as guides. After two world wars there were so many blinded veterans that the need

for mobility became urgent and crucial.[1]

Ball says children's physical and psychological readiness must be considered in the training of blind children in mobility. There is need for the training of teachers in colleges and universities with special courses in education so that the educators in the future who will be working with blind children will understand the mobility needs of these children.[2]

In 1949, Hines Hospital, a Veterans Administration Hospital, started instructions for persons from various agencies for the blind. As mobility demands increased, standards were set up for mobility and orientation instruction. These standards for mobility training were patterned after the program used by the army. This basic program is used in vocational rehabilitation and also by the American Foundation for the Blind.[3]

Ball states that the first graduate programs for training persons to be teachers of mobility were at Boston College and Western Michigan University.[4] There was immediate need for 100 trained mobility experts, but later this number was

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[1]Martha J. Ball, "Peripatologist, Mobility in Perspective," Blindness (American Association of Workers for the Blind, Inc., 1964), pp. 107-41.

[2]Ibid.

[3]Ibid.

[4]Ibid.

found to be far too conservative. In 1962 grants were established for mobility training for demonstration projects. These projects were to show the value and needs for mobility training for blind clients in the area of the country where the project existed.[1]

Perhaps the future programs in mobility will become so successful and effective that every blind person may better realize a means of mobility. The science of mobility is new and, therefore, is not immune from the problems faced by any new area of training. Writers in the area of mobility training generally agree that more training programs are needed to train experts in this field. They also agree that only trained persons should instruct blind persons in the skills and techniques of mobility.

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[1] Ibid.

CHAPTER XII

ORIENTATION AND MOBILITY WITH VISUALLY IMPAIRED ADULTS

The ability of the blind to move about freely and be aware of the surroundings in their immediate area is essential for living and for making a livelihood. There are various modes of mobility such as the seeing eye dogs, the cane, and the sighted human guide. Blind people are evaluated in terms of their mobility performance. The use of mobility media should be evaluated according to the use and satisfaction of the individual. An orientation and mobility program prepares the blind person in the following ways:

1. To travel to work and return; the use of conveyances and the use of the telephone.
2. Movements in a work area, changes in buildings, place for tools or materials.
3. Fire drills, confusion, crowded work areas.
4. To conform to the rules and the demands of an organization where he works; to be able to get along with his fellow workers and customers.
5. In daily life when and how he is to ask for locations

such as restrooms and cafes.

6. Awareness of where to expect moving objects such as busses and cars.

7. At home, the location and sound of the telephone and the doorbell; to be able to distinguish which is the telephone and which is the doorbell.[1]

The blind individual moving freely about has many things to cope with in the way of hazards. He should be alert to stop quickly or to move in quickly.[2]

The orientation and mobility training enables the blind to be able to make adjustments and to prepare for future stresses and hazards. This program can be adjusted to apply to each individual according to the place he is planning to work and to prepare him to be oriented so he can adequately compete with the sighted persons.

The area of reorientation is often overlooked. If changes in the work program are made, he should be oriented to the new changes.

Programs of orientation and mobility are being carried on in different countries all over the world as a part of rehabilitating the blind into a useful and productive place in society. Every country has its blind population who need

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[1]Irving J. Kruger, "Orientation and Mobility in the Vocational Area," The New Outlook for the Blind, LIV (March, 1960), 87-90.

[2]Ibid.

to take a useful place in society.

Typical of progressive programs for the blind in countries outside of the United States is the program of rehabilitation being carried on in Israel for its blind population. According to Menzel, there is a very high per cent of blind persons of working age in Israel. This condition is partly due to the immigrant population from underdeveloped countries. In the Anglo-Saxon countries one finds about 15 to 20 per cent. Israel has 60 per cent of their blind population of working age. This condition necessitates a country to have an orientation and mobility program to prepare these handicapped individuals for useful lives.[1]

When an individual loses his sight, his whole life situation changes. Sight is the most important sense a person has. The sense of touch becomes the most important sense when sight is lost, according to Menzel. Although touch is very important to the blind person, it does not extend the distance of sight. With the loss of sight the individual cannot quickly move into new areas and acquaint himself with his surroundings. It becomes difficult to walk in a straight line direction or to go to a certain place directly or by the shortest path. The blind person has to find his way by sound or by noise or by his sense

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[1]Rudolphina Menzel, "Mobility and Orientation in Israel," The New Outlook for the Blind, LVIII (May, 1966), 157-58.

of touch.[1]

With the loss of his sight there is a loss of mobility and orientation which is a very serious handicap for the blind person. This individual immediately feels physically, socially, and economically dependent. These types of feelings can bring on untold amounts of frustration and can even produce manifestations of other physical problems.[2]

It is difficult for the blind individual to occupy his time for he is dependent on a sighted guide to take him out socially. The blind person often resents his lack of privacy. Gradually a blind person's visual memory fades; he loses interest in asking about his environment. Unless his sighted human guide keeps him informed and describes things around him which help to keep his interest, he removes himself more and more from the world and his surroundings. This should not be allowed to happen as this is not what the desire or intention of society is. The hope is to keep the blind person eager to remain in the same groups with his sighted peers.[3]

To take their place with sighted persons the blind must be trained in orientation and mobility, and the use of the cane or the dog guide is accepted as necessary. The use of

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[1] Ibid.

[2] Ibid.

[3] Ibid.

the human guide is also another means of mobility for the blind individual, but it is not as independent a method for getting around as the other two methods. The blind person usually has a preference from which he can get the greatest feeling of efficient mobility. Often a blind person needs help in selecting the mobility device which will be the best for him and which will fulfill his needs. The dog guide takes the person about much faster and more safely than is possible with a cane, avoiding hazards, finding entrances and exits to houses, buildings, or conveyances, and reaching desired destinations.[1]

Some blind people cannot have a dog guide because they may not like a dog for a companion, or perhaps the blind person may live where his needs are not complicated enough to have a dog. To a great many blind persons, the use of a cane would be very adequate.[2]

In the field of orientation and mobility, the sincere desire of the workers is to help the greatest possible number of blind individuals attain such a fine degree of mobility that they can take their places in competitive industry with their sighted peers. Then no longer will the blind population be required to work in such occupations that have been labeled as work for the blind.

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[1] Ibid.

[2] Ibid.

Because of the great importance which mobility has to blind people, a recent survey was conducted to see if the potential blind population in the United States would be requiring more dog guide facilities in the near future. According to Finestone, Lukoff, and Whiteman, it has been found that the estimated demand for dog guide service and the potential need for dog guides in the immediate future would be such that there would be no immediate need for plant expansion or more training centers. At the present there are eleven training centers in the United States. Most candidates are between the ages of fifteen to fifty-four, so this survey showed.[1]

There are some blind persons who are not capable of using dog guides and a very careful study should be made of the client and his environment and needs before a dog guide is chosen by a client. It is highly possible that many blind persons may eventually be capable of using a dog guide. These blind persons should be helped to overcome their objections to using a dog guide. Most dog guide schools eliminate clients who have enough vision to be able to get around without aid, those too old or physically not able to get around. Finestone, Lukoff, and Whiteman point out that those blind individuals with emotional disturbances, poor health, low intelligence,

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[1]Finestone, Lukoff, and Whiteman, op. cit.

dog phobia, no place to keep or exercise the dog, and family objections are also not eligible for a dog guide. In order to fulfill the desired need of the blind, problems often can be taken care of so the blind individual can get a dog guide.[1]

It is an accepted fact that there is a need for the blind person to be able to move about in order to facilitate his adjustment. It affects him in his work as a student or in getting to and from his work or as a member of any group. His relationship is affected by those with whom he comes in contact, as well as his own satisfaction with himself.[2]

Many blind persons lack confidence in travel but do not make too much effort toward improving themselves. They seem to feel their limitations because they are not more highly mobile. They are limited in mobility because of their handicap, and they tend to accept this limitation. Sometimes the limitations which the blind person feels are due to over-protection of the family or the community. Also, there are shortages in most communities of rehabilitation services; this creates a sense of apathy.[3]

Some blind persons hesitate to use a dog guide because of misinformation which they have received. There is a con-

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[1] Ibid.

[2] Ibid.

[3] Ibid.

siderable amount of wrong information about a dog guide such as control or proper care of a dog, expense of feeding a dog, and the notion that a dog guide causes too much attention.[1]

According to Finestone, Lukoff, and Whiteman, there is a definite need for more and better social services for individual blind persons; also more psychological services are needed by these people. There should be closer coordination of all agencies in the field in regard to the blind population.[2]

According to Curtis, mobility may be described as moving about freely from place to place. Mobility is not only physical movement, it is also psychological movement which involves feelings, opinions, desires, and aims.[3]

Society has great concern for these handicapped persons, and our present day society is doing much to be of assistance to help these handicapped persons become oriented to their surroundings. Mobility is no doubt the greatest need of the blind, according to Curtis.[4]

The blind are aware of many limitations of which the sighted person is hardly conscious, such as security, personal

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[1] Ibid.

[2] Ibid.

[3] George T. Curtis, "Mobility: Social and Psychological Implications," The New Outlook for the Blind, LVI (January, 1962), 14-18.

[4] Ibid.

independence, job opportunity, loss of career, loss of visual perception of the beauty around him, and many more.[1]

According to Curtis, the loss of independence often causes a blind person to become too independent because he feels he is justified due to his handicap. He may become depressed. However, society expects the blind to be rehabilitated and oriented in order to return to employment and take his place among his sighted peers. In some cases the attitudes of members of his family, as well as those of his friends make a difference to the blind person in matters involving his mobility and thus his adjustment. Not always are the attitudes of those close to the blind person of a positive nature, and these attitudes can be harmful. In an environment of hostile reactions, negative attitudes work against the rehabilitation of the client. Sometimes families may relate to friends that this handicapped person is the only member of their family who is handicapped. This type of statement on the part of a member of his family gives the blind person the feeling of not being one of the family.[2]

Curtis states that the rehabilitation and vocational period prepares the blind person for appropriate employment to which he is adapted. Learning orientation and mobility skills

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[1] Ibid.

[2] Ibid.

are part of the individual's rehabilitation into a respected position in the community.

CHAPTER XIII

CONCLUSION

Orientation and mobility skills make it possible for the blind person to take the skills which he has to a position of employment. It is necessary that the client take positive action for his adjustment and rehabilitation.

The goal of society and all of its agencies is to train and rehabilitate the blind and to place them in employment where they are most capable and qualified. This type of approach will help to preserve the blind individual's self esteem and personal dignity.

There is agreement among authorities in the field of rehabilitation of the blind that these individuals should be given orientation and mobility training so they can return to useful employment and a purposeful place in society. They further agree that orientation and mobility training are essential to a healthy personal, social, and economic adjustment for blind persons. The more capable the handicapped person is in mobility, the less blind he will seem to those around him.

The economic, social and vocational assets which accrue

from the blind person's ability to remain oriented within his environment enables him to enjoy independence in his mobility. The individual satisfaction obtained from such competency is obvious. This competency provides a psychological asset which is fundamental to healthy, happy, and productive living. This asset should be pointed out to all blind persons in helping to encourage them to obtain and maintain mobility independence.

The instruction of the blind individual in the proper skills of physical orientation and mobility will contribute immensely to his total adjustment. Orientation and mobility competency will offer one of the most important and fundamental contributions to the blind person's total adjustment, habilitation or rehabilitation. Proper orientation and mobility training is equal in importance to any other training which the blind individual may receive.

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MOBILITY. (1968)

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